

# PATENT ABSTRACTS OF JAPAN

(11)Publication number : 10-260267

(43)Date of publication of application : 29.09.1998

(51)Int.Cl. G01W 1/10  
G01S 13/95  
G06F 17/00  
G06T 1/00

(21)Application number : 09-064665

(71)Applicant : NIPPON TELEGR & TELEPH  
CORP <NTT>

(22)Date of filing : 18.03.1997

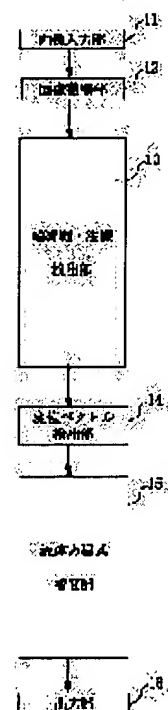
(72)Inventor : SAKAINO HIDETOMO  
HORIKOSHI TSUTOMU  
SUZUKI SATOSHI

## (54) PREDICTION METHOD AND DEVICE FOR LOCAL RAIN ZONE

### (57)Abstract:

**PROBLEM TO BE SOLVED:** To provide a method and device for a local rain zone which estimates and simultaneously predicts total moving velocity with the use of fluid equations and is drastically reduced in operation cost.  
**SOLUTION:** A radar image of a rain zone is input by using an image input part 11, preprocessing is done with the image taken out of an image accumulation part 12 in an

outline/normal detector 13, some blocks are detected, the outline is calculated, a tangent line and a normal of the outline are calculated, the normal is extended from the base point to the direction outside and inside of the outline till crossing with the outline of a later rain zone in a displacement vector detector 14. A normal vector and a velocity vector of the normal are calculated. By substituting the velocity vector in the fluid equation as an initial value at the fluid equation interpolation part 15, the velocity vector value is interpolated. By repeatedly interpolating, a predicted velocity vector is calculated. By substituting it in a density diffusion/advective equation together with shape light and shade value information for the rain zone, the change of the rain zone is predicted of which prediction image is output externally to the output part 16.



## LEGAL STATUS

[Date of request for examination] 23.10.2000

[Date of sending the examiner's decision of rejection]

[Kind of final disposal of application other than the examiner's decision of rejection or application]

converted registration]

[Date of final disposal for application]

[Patent number]

[Date of registration]

[Number of appeal against examiner's decision of rejection]

[Date of requesting appeal against examiner's decision of rejection]

[Date of extinction of right]

Copyright (C); 1998,2000 Japan Patent Office